

Tagging of Halibut (*Hippoglossus vulgaris* Fleming)  
in Norwegian Waters 1956-1959 and at Bear Island 1958.

by Jonas Tjemsland  
Intitute of Marine Research,  
Bergen, Norway.

Methods and Material.

Before the war tagging of halibut was carried out by Devold and Thor Iversen on several localities (Devold 1943). In 1956 the halibut taggings were started again in North Norway, and each year since some tagged halibut have been released. A complete record of these experiments is given in Table I.

The fish tagged in January and February were caught with gill nets. Because of the gear selectivity and the difficulties in bringing on board large fish uninjured, practically all matured fish tagged were males except for seven females released in 1956. The halibut tagged at Bear Island, in Hadsselfjord and near Gåsøy were all immature fish.

In all experiments Lea tags were used. The tag was attached to the flesh on the dark side of the fish near the dorsal fin, with double monofilament nylon of 0.50 mm diameter in a similar way as described by Dannevig (1953).

In 1956 a small, yellow plastic flag was attached to the Lea tag to make it more conspicuous; and the same year at Silda each fish was also tagged with a strap tag in the opercular bone.

Discussion.

On the map of Fig. I the tagging areas are indicated by circles of 8 nautical miles radius, and the recoveries made outside these areas are plotted.

It would appear that no large mature halibut tagged on the spawning grounds in anyone area is recaptured outside this area during the spawning time (Nov. -March) in the following years. It is particularly noticed that no fish tagged at Folda has been recaptured during the spawning time at Salten or vice versa, although the distance between these localities is only 30 nautical miles,

As already suggested by Devold (1943) this would indicate that the stock of mature halibut is composed of separate units which do not intermingle on the spawning grounds. However, the two recaptures (No 19952 and No 29099) in October in Finnmark at considerable distances east of the tagging area, might indicate that this is not strictly true; and this important question should therefore be more carefully studied.

The material also show that after spawning the halibut migrate off shore, but some fish may remain in the fjords and coastal waters during the summer.

The taggings of young immature halibut have shown that these fish, which grow up in the fjords and coastal waters are not stationary; and may migrate over great distances along the coast.

Some of the returned Lea tags with flag have been examined. The plastic flags were found to be more or less destroyed, and in some cases the flag was missing altogether. The usefulness of this method to make the tags more conspicuous is therefore doubtful.

From the fish tagged in 1956 with both Lea and strap tags, more Lea tags than strap tags were returned in 1956 and 1957, but in the third and fourth year of liberation only strap tags have been returned. Thus for the first two years the Lea tag appears to be more effective. However, the Lea tag will probably not remain fastened to the fish for any longer period of time when attached in the way mentioned above.

#### References:

- Dannevig, G. 1953: Tagging experiments on cod, Lofoten 1947-1952: Some preliminary results.  
J. Cons. Explor. Mer, 19 (2) : 195-203.
- Devold, F. 1938: The North Atlantic Halibut and Net Fishing  
Rep. Norweg. Fish. Invest. 5 (6) : 1-47.
- Devold, F. 1943: Notes on Halibut (*Hippoglossus vulgaris* Fleming).  
Ann. biol., Copenhagen (1939-41) 1 : 35-40.

TABLE I

Record of tagging experiments.

Years and months	Locality	N	Gear	Size range cm	Recaptures			
					1956	1957	1958	1959
1956								
Jan. -Feb.	Near Silda	114	Gill-net	90-210	8	8	4	1
April-May	Near Gåsøy	50	Long lines	50-110	7	4	-	-
1957								
Jan. -Feb.	Near Silda	145	Gill-net	70-135	-	8	-	-
"	Folda-Salten	55	"	"	-	9	6	-
1958								
Jan. -Feb.	Near Silda	44	"	90-150	-	-	3	1
April-Dec.	Hadsselfjord	54	Shrimp trawl	25- 55	-	-	-	3
Sept. -Dec.	Bear Island	30	Long lines	50- 90	-	-	1	1
1959								
Jan. -Feb.	Near Silda	136	Gill-net	50-135	-	-	-	7

TABLE II

Records of halibut recaptured, tagged near Silda  
 $70^{\circ}23'N-22^{\circ}00'E$ , 1956, total number tagged: 114.

Tag no	Date marked	Size cm	Locality of recovery	Date of recovery	Final size	Gear used	Nat. of vessel
N-17-A 406 N-Lea 19906)	12/1	121	Near Silda	28/1-57	-	G.N.	N.
N-Lea 19917	14/1	126	" "	4/2-57	-	G.N.	N. x)
N-17-A 424 N-Lea 19924)	"	121	$72^{\circ}23'N-17^{\circ}20'E$	13/5-56	123	O.T.	G.
N-17-A-425 N-Lea 19925)	"	124	Near Silda	25/1-57	-	G.N.	N.
N-17-A 446 N-Lea 19946)	18/1	127	$70^{\circ}35'N-21^{\circ}40'E$	2/3-56	127	L.lns.	N.
N-17-A 452 N-Lea 19952)	20/1	114	$70^{\circ}53'N-25^{\circ}16'E$	16/10-56	-	L.lns.	N.
N-17-A 454 N-Lea 19954)	"	121	Near Silda	28/1-56	-	L.lns.	N.
N-Lea 19962	"	120	" "	26/2-57	-	G.N.	N.
N-Lea 19974	25/1	130	" "	28/1-57	-	G.N.	N.
N-17-A 476 N-Lea 19976)	"	127	" "	17/1-57	-	G.N.	N.
N-Lea 19984	"	119	" "	9/2-57	-	G.N.	N. x)
N-Lea 19986	"	129	$72^{\circ}50'N-16^{\circ}30'E$	3/5-56	-	O.T.	G.
N-17-A 488 N-Lea 19988)	"	116	$72^{\circ}48'N-17^{\circ}31'E$	22/4-56	-	O.T.	R.
N-Lea 19996	3/2	131	$69^{\circ}27'N-34^{\circ}15'E$	Aug. 56	-	O.T.	R.
N-17-A 418	14/1	131	Near Silda	31/12-58	-	G.N.	N.
N-17-A 429	"	125	$70^{\circ}15'N-22^{\circ}20'E$	March 1959	-	G.N.	N.
N-17-A 432	16/1	130	Near Silda	Dec. 1958	-	G.N.	N.
N-17-A 433	"	122	$70^{\circ}41'N-30^{\circ}40'E$	20/4-58	-	O.T.	N.
N-17-A 450	20/1	137	$70^{\circ}32'N-23^{\circ}03'E$	4/10-57	-	L.lns.	N.
N-17-A 475	25/1	133	Near Silda	20/12-56	-	G.N.	N.
N-17-A 492	1/2	129	" "	18/2-58	132	G.N.	N.

Tagging 1958, total number tagged: 44.

N-Lea 29056	16/1	97	$70^{\circ}38'N-21^{\circ}48'E$	2/5-58	-	L.lns.	N.
N-Lea 29063	28/1	80	$71^{\circ}08'N-23^{\circ}53'E$	24/5-58	-	L.lns.	N.
N-Lea 29091	17/2	123	Near Silda	12/3-59	-	G.N.	N.
N-Lea 29099	20/2	131	Laksefj. -Finnmark	1/10-58	137	L.lns.	N.

TABLE II cont.

Tagging 1959, total number tagged: 136

Tag no	Date marked	Size cm	Locality of recovery	Date of recovery	Final size	Gear used	Nat. of vessel
N-Lea 29470	24/1	125	70°06'N-23°05'E ?	" ?	-	?	N.
N-Lea 29477	26/1	80	70°47'N-21°55'E	27/4-59	81	O.T.	N.
N-Lea 29483	29/1	90	70°34'N-21°44'E	14/4-59	-	G.N.	N.
N-Lea 29499	"	75	Near Silda	11/3-59	76	G.N.	N.
N-Lea 48840	31/1	73	70°44'N-22°23'E	4/6-59	74	L.lns.	N.
N-Lea 48444	"	76	70°23'N-19°35'E	6/3-59	76	G.N.	N.
N-Lea 48464	"	135	Stjernfoten-Silda	"	-	G.N.	N.

Records of halibut recaptured, tagged at Folda  
67°35'N-14°56'E, 1957, total number tagged: 42.

N-Lea 29002	10/1	127	67°26'N-13°55'E	12/7-58	-	L.lns.	N.
N-Lea 29009	16/1	116	Folda	Dec. 57	-	G.N.	N.
N-Lea 29014	19/1	132	Folda	20/11-58	-	G.N.	N.
N-Lea 29022	28/1	111	Folda	7/2-57	-	G.N.	N.
N-Lea 29028	30/1	130	Folda	4/2-57	-	G.N.	N.
N-Lea 29029	"	121	67°33'N-15°40'E	19/12-57	-	L.Lns.	N.
N-Lea 29031	31/1	128	Folda	12/12-57	-	G.N.	N.
N-Lea 29032	"	117	68°35'N-14°52'E	12/3-57	-	-	N.
N-Lea 29048	20/2	114	Folda	3/12-58	120	G.N.	N.
N-Lea 29051	"	107	Folda	3/11-58	109	G.N.	N.
N-Lea 29054	"	128	Folda	22/2-57	-	-	N.

Records of halibut recaptured, tagged at Salten  
67°13'N-14°00'E, 1957, total number tagged: 13

N-Lea 29038	11/2	127	Salten	13/3-57	-	G.N.	N.
N-Lea 29042	"	112	Salten	20/11-58	-	G.N.	N.
N-Lea 29045	"	95	67°50'N-13°45'E	13/3-57	-	L.lns.	N.
N-Lea 29046	19/2	108	65°20'N-11°53'E	24/7-58	108	-	N.

TABLE II cont.

Records of halibut recaptured, tagged near Gåsøy  
 $71^{\circ}04'N-24^{\circ}25'E$ , 1956, total number tagged: 50

Tag no	Date marked	Size cm	Locality of recovery	Date of recovery	Final size	Gear used	Nat. of vessel
N-Lea 19803	26/4	67	$71^{\circ}06'N-26^{\circ}10'E$	18/5-56	69	L. lns.	N.
N-Lea 19802	27/4	66	Gåsøy-Hjelmsøy	9/5-57	-	L. lns.	N.
N-Lea 19806	27/4	63	$71^{\circ}24'N-24^{\circ}40'E$	5/12-56	65	L. lns.	N.
N-Lea 19809	27/4	61	$71^{\circ}17'N-24^{\circ}43'E$	5/6-56	63	L. lns.	N.
N-Lea 19820	1/5	64	$71^{\circ}30'N-24^{\circ}43'E$	23/11-56	80	-	N.
N-Lea 19828	3/5	64	$70^{\circ}58'N-25^{\circ}58'E$	22/10-56	67	-	N.
N-Lea 19836	8/5	67	$71^{\circ}05'N-26^{\circ}14'E$	15/5-57	-	D.S.	N.
N-Lea 19839	8/5	59	$71^{\circ}28'N-24^{\circ}38'E$	4/12-56	63	L. lns.	N.
N-Lea 19847	May	-	$70^{\circ}35'N-31^{\circ}00'E$	3/6-57	75	O.T.	-
N-Lea 19850	May	-	$71^{\circ}15'N-25^{\circ}02'E$	17/11-56	63	L. lns.	N.
N-Lea 19853	May	-	$70^{\circ}28'N-31^{\circ}06'E$	7/6-57	75	L. lns.	N.

Records of halibut recaptured, tagged in Hadsselfjord  
 $68^{\circ}28'N-14^{\circ}42'E$ , 1958, total number tagged: 54.

N-Lea 29221	24/4	41	$62^{\circ}55'N-06^{\circ}44'E$	16/3-59	53, 4	O.T.	N.
N-Lea 29234	10/5	42	$69^{\circ}05'N-14^{\circ}45'E$	27/4-59	-	-	N.
N-Lea 29240	27/5	46, 5	$69^{\circ}55'N-06^{\circ}49'E$	8/4-59	55	G.N.	N.

Records of halibut recaptured, tagged at Bear Island,  
 1958, total number tagged: 30.

Liberated at  $74^{\circ}01'N-18^{\circ}30'E$

N-Lea 29314	6/11	66	SW Bear Island	12/11-58	-	-	E.
-------------	------	----	----------------	----------	---	---	----

Liberated at  $74^{\circ}14'N-16^{\circ}12'E$

N-Lea 29321	18/11	55	$71^{\circ}14'N-27^{\circ}45'E$	21/3-59	-	-	-
-------------	-------	----	---------------------------------	---------	---	---	---

Abbreviations: G.N. = gill net  
 L. lns. = long line  
 O.T. = trawl  
 D.S. = Danish seine

E = English  
 G = German  
 N = Norwegian  
 R = Russian

x) The fish is liberated again.

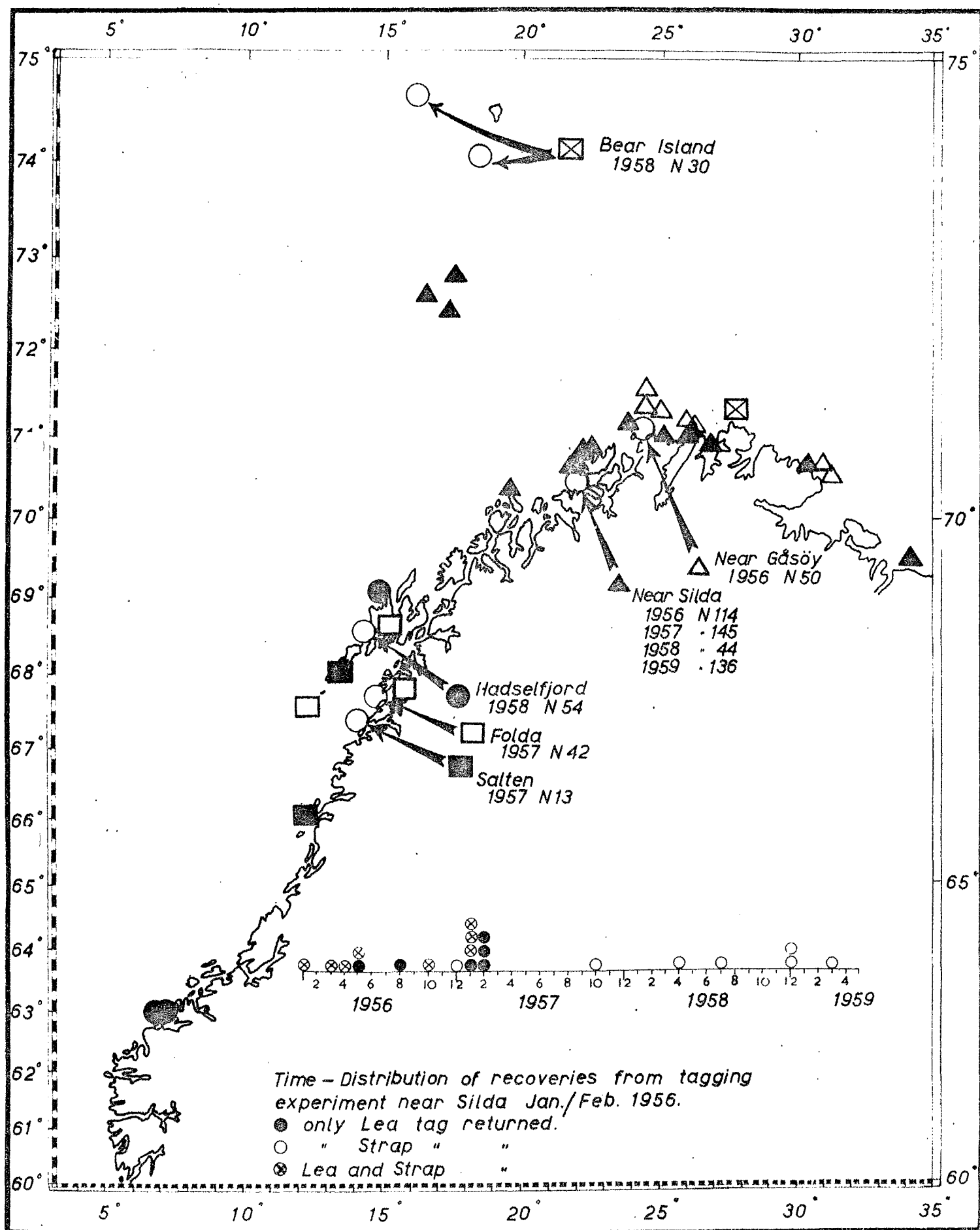


Fig. I. Norwegian tagging of halibut.